4.13

Exponents Review & Solving Using One-to-One Property

Name_____ **Date**_____ **Period**_____

Simplify

1. $3^2 =$
2. $5^{-2} =$
3. $\frac{1}{6^{-3}} =$
4. $\left(\frac{1}{5}\right)^3 =$
5. $\left(\frac{1}{7}\right)^{-2} =$
6. $3x^2 =$
7. $(3x)^2 =$
8. $x^4x^2 =$
9. $\frac{x^5}{x^3} =$
10. $64^{\frac{5}{3}} =$
11. $\frac{1}{4^{-\frac{3}{2}}} =$
12. $(25)^{\frac{3}{2}} =$

Solve each equation. Show your work!!

13. $7^2 = 7^x$
14. $4^{-2x-2} = 4^{3x}$
15. $3^{-2x} = 27$
16. $5^{2x} = \frac{1}{25}$
17. $\left(\frac{1}{4}\right)^{-2x-1} = 16$
18. $243^{-x+3} = \frac{1}{3}$

Solve each equation. Show your work!!

19. $8^n = \frac{1}{2}$

20. $2^{-x-3} = 2^{x-2}$

21. $81^{3x} = \left(\frac{1}{9}\right)^{2-2x}$

22. $4^{(1-2x)} = 2$

23. $8^{(6+3x)} = 4$

24. $9^{x} = 3^{x-1}$

25. $\left(\frac{1}{2}\right)^{3-x} = 8^3$

26. $5^x = 25^{3-2x}$

27. $\left(\frac{1}{9}\right)^{x} = 27$

28. $\frac{8^{-p}}{8^{3p}} = \frac{1}{16}$

29. $\frac{6^x}{6^{2x-1}} = 36$

30. $16^{x+1} = 4^3$

31. $\frac{1}{5^x} = 25$